

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
16 June 2005 (16.06.2005)

PCT

(10) International Publication Number
WO 2005/053532 A1

(51) International Patent Classification⁷: **A61B 5/113, 5/0408**

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:
PCT/EP2004/053251

(22) International Filing Date: 3 December 2004 (03.12.2004)

(25) Filing Language: English

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(26) Publication Language: English

(30) Priority Data:
FI2003A000308 3 December 2003 (03.12.2003) IT

(71) Applicant (for all designated States except US): **MILIOR S.P.A.** [IT/IT]; Via Pistoiese, 755/D, I-59100 Prato (IT).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **PARADISO, Rita** [IT/IT]; Via di Campitello, 12, I-55060 Guano Capannori (IT).

(74) Agents: **GERVASI, Gemma et al.**; Notarbartolo & Gervasi S.p.A., Corso di Porta Vittoria 9, I-20122 Milan (IT).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/053532 A1

(54) Title: KNITTED TEXTILE FOR THE MONITORING OF VITAL SIGNALS

(57) Abstract: The present invention relates to the non-invasive monitoring and in particular it refers to a wearable system for the monitoring of vital signals (cardiovascular, respiratory and an index of movement) to be used for the detection of potential pathologies via the acquisition, elaboration and transmission of signals, where the sensitive elements are done with knitted fabric, in direct contact with the body and that could be, if necessary, elastic, where yarns, having characteristics that allow the production of fabric piezoresistive regions and fabric conductive regions working as electrodes or connections, are integrated.